

disappeared, while *Cypraea arabica* (Schilder) has become very rare on Bombay coast. In some of these publications the occurrence of *C. cumingii* has been mentioned.

I came across an unusual cone species which I could not identify, on 21 May 1990 on a south Bombay beach. Subsequently, I made several visits to the same place to make a detailed study of this cone shell. In 1990, I could see seven live specimens of this species, of which two are in my personal collection. This species was later identified as *Conus cumingii* (Reeve, 1848) with the help of Dr. M.G. Harasewych, Divn. of Mollusks, Smithsonian Institution, U.S.A.

The shell is moderately large (average 5.2 cm) with tall spires; outer lip thickened. Chestnut brown in ground colour with a prominent white spotted zone

midway on the body whorl. Upper margin of body whorl bears alternately arranged white and brown spots. Brown spiral lines are present on the entire surface, but darker near the upper ridge and at the mid-zone of body whorl.

Distribution: According to Dr. Harasewych, this species has a distribution from the Bay of Bengal to the western rim of Western Pacific, though Van Nostrand (1967) gives its locality as Philippines. It is possible that this form may be a subspecies, but this requires a detailed study.

I thank Dr. M. G Harasewych, Associate Curator, Division of Mollusks, Smithsonian Institution, U.S.A. for help in identifying the shell.

August 9, 1991

DEEPAK APTE

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33. CORRECTIONS AND ADDITIONS TO THE FLORA OF GURDASPUR DISTRICT, PUNJAB

In an earlier communication, Bir and Singh (1989) had reported new records for Punjab State. Sixty nine species of flowering plants collected from Gurdaspur district were added to the list of plants from Punjab. Subsequently, during compilation of the flora of Gurdaspur district and Punjab state, re-examination of the materials revealed some startling inaccuracies. Unfortunately, this has been the result of mixing up of specimens and field numbers and wrong identifications. Hence the present communication wherein we report corrections to 'Additions' for Punjab state and make a few other nomenclatural corrections. Specific identifications and nomenclature of all the 69 species were subsequently checked by comparing with authentic vouchers at BSD.

Correct identifications of 29 species as erroneously reported earlier are given below. For

enumeration of the species, original serial numbers are given for quick reference. PUN accession numbers are mentioned for each so as to pin-point the specimens. Other details for locality, collector, etc. remain the same. Correct family reference is made wherever necessary.

2. *Capsella bursa-pastoris* (Linn.) Medik., PUN 35771, 35772.

Lepidium perfoliatum sensu Bir & Singh (1989): non Linn. 1753.

5. *Geranium mascatense* Boiss. var. *himalaicum* Babu (= *G. ocellatum* Camb.) PUN 33348, 33349.

Geranium lucidum sensu Bir & Singh (1989): non Linn. 1753.

*7. *Ranunculus laetus* Wall. ex D. Don, PUN 33630, 33631, Fam: Ranunculaceae.

Geranium wallichianum sensu Bir & Singh (1989): non Don 1825.

TABLE 1

Species number as in Bir and Singh (1989)	Correct name or citation	Name published in Bir and Singh (1989)
1.	<i>Clematis gouriana</i> Roxb. ex DC.	<i>Clematis gouriana</i> Roxb.
3.	<i>Polygala abyssinica</i> R.Br. ex Fresen.	<i>Polygala abyssinica</i> R. Br.
4.	<i>Hypericum oblongifolium</i> Choisy	<i>Hypericum cernuum</i> Roxb.
8.	<i>Argyrolobium flaccidum</i> (Royle) Jaub. & Spach.	<i>Argyrolobium flaccidum</i> Jaub. & Spach.
9.	<i>Atylosia volubilis</i> (Blanco) Gamble	<i>Atylosia crassa</i> Prain
31.	<i>Taraxacum officinale</i> Wiggers	<i>Taraxacum officinale</i> Webber
33.	<i>Primula umbellata</i> (Lour.) Benth.	<i>Androsace umbellata</i> (Lour.) Merr.
37.	<i>Centaurium centaurioides</i> (Roxb.) Rao & Hemadri	<i>Centaurium centaurioides</i> (Roxb.) comb. nov.
46.	<i>Rostellularia diffusa</i> (Willd.) Nees	<i>Rostellularia diffusa</i> Nees
47.	<i>R. mollissima</i> (Nees) Nees	<i>R. mollissima</i> Nees
52.	<i>Polygonum nepalense</i> Meissn.	<i>Polygonum alatum</i> Buch.-Ham.
54.	<i>Polygonum capitatum</i> Buch.-Ham. ex D. Don	<i>Polygonum capitatum</i> Buch.- Ham.
58.	<i>Securinega virosa</i> (Roxb. ex Willd.) Baill.	<i>Flueggea virosa</i> Roxb. ex Willd.

10. *Crotalaria prostrata* Rottl. ex Willd., PUN 33926

Crotalaria pusilla sensu Bir & Singh (1989): Non Heyne 1821.

11. *Desmodium elegans* DC., PUN 34170, 34171.

Desmodium podocarpum sensu Bir & Singh (1989): non DC. 1825.

14. *Rubus niveus* Thunb., PUN 34180, 34181.

Rubus biflorus sensu Bir & Singh (1989): non Buch.-Ham. 1819.

19. *Premna mucronata* Roxb., PUN 33907, 33909, Fam: Verbenaceae.

Viburnum coriaceum sensu Bir & Singh (1989) : non Bl. 1826-1827.

20. *Ehretia aspera* Roxb., PUN 34151, Fam: Ehretiaceae.

Viburnum erubescens sensu Bir & Singh (1989): non wall. 1820.

21. *Oldenlandia corymbosa* Linn., PUN 31189, 31190.

Galium asperifolium sensu Bir & Singh (1989) : non wall. 1820.

*22. *Rubia cordifolia* Linn., PUN 34182.

Galium hirtiflorum sensu Bir & Singh (1989): Non DC. 1838.

23. *Xylosma longifolium* Clos., PUN 35172, fam: Flacourtiaceae.

Plectronia neilgherensis Bedd. var. *chartacea* sensu Bir & Singh (1989): non Gamble 1918.

25. *Gnaphalium luteo-album* Linn., PUN 33607, 33608.

Anaphalis busua sensu Bir & Singh (1989): non DC. 1838.

*28. *Erigeron karvinskianus* DC., PUN 34167.

Erigeron multicaulis sensu Bir & Singh (1989) : non DC. 1838.

32. *Lindernia crustacea* (Linn.) F.V. Muell., PUN 31191, 31192, Fam: Scrophulariaceae.

Lobelia heyneana sensu Bir & Singh (1989): non Roem & Schult. 1819.

34. *Grewia disperma* Rottl. ex Spreng., PUN 31445, 31446, Fam: Tiliaceae.

Symplocos sumuntia sensu Bir & Singh (1989): non Don 1825.

35. *Reinwardtia indica* Dum., PUN 33419, 33450, Fam: Linaceae.

Jasminum humile sensu Bir & Singh (1939): non Linn. 1753.

38. *Gentiana aprica* Decne, PUN 33615.

Gentiana argentea sensu Bir & Singh (1989) : non DC. 1838.

*39. *Swertia angustifolia* Buch.-Ham. ex D. Don, PUN 34179.

Swertia purpurascens sensu Bir & Singh (1989): non

wall. 1831

42. *Limnophila indica* (Linn.) Druce, PUN 34123.
Limnophila connata sensu Bir & Singh (1989) : non Don 1825.

44. *Limnophila indica* (Linn.) Druce, PUN 34120.
Sutera dissecta sensu Bir & Singh (1989): non Walp. 1842.

45. *Maytenus royleanus* (Wall. ex Lawson) Cuf.
(=*Gymnosporia royleana* wall. ex Lawson), PUN 33611, 33612, Fam: Celastraceae.

Barleria buxifolia sensu Bir & Singh (1989): non Linn. 1753.

49. *Nepeta hindostana* (Roth) Haines, PUN 33914.
Nepeta graciliflora sensu Bir & Singh (1989) : non Benth. 1830.

50. *Ocimum canum* Sim., PUN 33922, 33923.
Plectranthus japonicus sensu Bir & Singh (1989): non Koidz. 1829.

55. *Polygonum barbatum* Linn. subsp. *gracile*
Danser, PUN 31203, 31204.

Polygonum donii sensu Bir & Singh (1989): non Meissn. 1826.

59. *Trema politoria* Planch., PUN 31497, 31498.
Trema orientalis sensu Bir & Singh (1989): non Roxb. 1832.

64. *Cyperus paniceus* (Rottb.) Boeck. var. *roxburghianus* (Cl.) Kuek., PUN 35498, 35499.
Cyperus cyperoides sensu Bir & Singh (1989): non Kuntze 1898.

65. *Chrysopogon serrulatus* Trin., PUN 34066, 34067.

Chrysopogon fulvus sensu Bir & Singh (1989): non Chiov. 1919.

66. *Eragrostis atrovirens* (Desf.) Trin. ex Steud., PUN 34128, 34129.

Eragrostis curvala sensu Bir & Singh (1989): non Nees 1854.

68. *Carex filicina* Nees, PUN 34068, 34069, Fam.: Cyperaceae.

Themeda villosa sensu Bir & Singh (1989): non Camus 1922.

Four species marked thus (*) still remain as 'New Records' for Punjab, whereas in the light of studies made by Sharma (1982a, b, 1985), the names of the other 25 species enumerated above need to be deleted from the list of additions given by Bir and Singh (1989).

Correct and currently accepted names and/or author's citations for some species (misquoted

earlier) are given in Table 1.

Crotalaria and *Desmodium* which were inadvertently included under Rosaceae should find place under Fabaceae.

The following species are additional 'New Records' for Punjab State. These are not included by Sharma (1990).

1. *Lepidium virginicum* Linn. A frequently occurring herb in the hilly-tract. *Fl. & fr.* March-August. *Charanpreet* 16568, Katori, 15 May, 1987 (PUN 35178, 35179). Family : Brassicaceae.

2. *Rhamnus purpurea* Edgew. A shrub growing near rocks in hilly tracts *Fl. & Fr.* September-December. *Charanpreet* 13677, Bhattwan, 10 September, 1986 (PUN 35476, 35477). Family: Rhamnaceae.

3. *Zanthoxylum armatum* DC. A small, strongly prickled tree. *Fl. & Fr.*: March-September. *Charanpreet* 13199, Katori, 10 March, 1986 (PUN 33634, 33635). Family: Rutaceae.

4. *Alternanthera philoxeroides* (Mart.) Griseb. A common herb in marshy places along perennial streams. *Fl. & Fr.* August-November. *Charanpreet* 12247, Pathankot, 20 October, 1986 (PUN 35478, 35479). Family Amaranthaceae.

5. *Costus speciosus* Smith. Found near perennial streams in the ravines of hill-tracts. *Fl. & Fr.* August-October. *Charanpreet* 13651, Dunera, 14 September, 1986 (PUN 35173, 35174). Family : Zingiberaceae.

6. *Arisaema jacquemontii* Blume. Found on slopes in shaded places. *Fl.*: June-November. *Charanpreet* 13657, Dunera, 14 September, 1986 (PUN 35180). Family : Araceae.

7. *Eleocharis geniculata* (Linn.) Roem. & Shult. A common plant in marshy and water logged areas. *Fl. & Fr.*: July-November. *Charanpreet* 9738, Dinanagar, 3 October, 1983 (PUN 35472-35475). Family: Cyperaceae.

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34. ADDITIONS TO THE FLORA OF BIHAR

The present communication highlights the occurrence and distribution of some rare and interesting angiosperms from eastern parts of Bihar state. During a detailed floristic exploration (1986-91) of eastern Bihar (23° 40' - 26° 35' N, 85° 30' - 88° 32' E), we could collect *Blumea obliqua* (L.) Druce (Asteraceae); *Calamus latifolius* Roxb. (Arecaceae); *Canavalia cathartica* Thouars. (Fabaceae); *Dendrobium peganum* Lindl. (Orchidaceae); *Elatostema cuneatum* Wight (Urticaceae); *Eragrostis aspera* (Jacq.) Nees (Poaceae); *Exacum carinatum* Roxb. (Gentianaceae); *Fimbristylis alboviridis* Clarke (Cyperaceae); *Peemna coriacea* Clark (Verbenaceae); *Spilanthes iabadicensis* A. H. Moore (Asteraceae) and *Stephania glandulifera* Miers (Menispermaceae). These taxa have not been recorded earlier from Bihar (Haines 1921-25, Mooney 1950, Bressers 1951, Panigrahi 1966, Srivastava 1959, Varma 1981, Singh 1986).

Hence the present collection and the distributional notes of these taxa would be of interest in highlighting their extended range of distribution in new areas not recorded earlier and it will also help in their conservation, as some of them are often used by tribal people. Brief descriptions, distribution and ecology of the species are given below. All the cited specimens have been deposited in the Bhagalpur University Herbarium, Bhagalpur. The identifications of the specimens have been confirmed at the Central National Herbarium (CAL).

Blumea obliqua (L.) Druce in Rep. Bpt. Exch. Club. Brit. Isles 4:609.1916(1917); Randeria, *Blumea* 10(1) : 286. 1960. *Erigeron obliquum* L. Mant. 2:573.1771. *Blumea amplexans* DC. in Wight Contrib. Bot. Ind. 13.1834; Hook. f. Fl. Brit. Ind. 2: 260. 1881; Haines, Bot. Bih. & Oris. 2: 491.1961 (Repr. ed.).

Annual herb, up to 50 cm high, much branched;

stems puberulous, leaves 2-9 cm long, upper amplexicaul, scabrous to velutinous; capitula solitary, 6-8 mm in diameter, terminal or in the axial of upper leaves; pedunculate, peduncles up to 5 cm long; achenes brown, pubescent, not ribbed; pappus white.

Flowering and fruiting: March-July.

Distribution: INDIA: Bengal, Orissa; Ceylon.

Ecology: Dry as well as wet places in waste lands, river banks; rare.

Specimens examined: Sakrigali (Sahibganj Dist.), Sriwastawa 4625; Jamalpur (Munger Dist.), Jha 7125.

Calamus latifolius Roxb., Fl. Ind. 3: 775. 1832; Hook. f. Fl. Brit. Ind. 6: 455. 1892; Haines, Bot. Bih. & Oris. 3:928. 1961 (Repr. ed.); Prain, Bengal Plants 2:827. 1963 (Repr. ed.).

A stout erect or scandent armed shrub; leaves rachis produced into a long flagellum, armed with recurved prickles; leaflets elliptic or elliptic-lanceolate; male spikes 6-15 cm long, flowers green, 4-7 mm long; female spikes 8-12 cm long, flowers greenish yellow, minute. Fruits 0.3-0.6 mm long, sub-globose, pale yellow.

Flowering and fruiting: December-April.

Distribution: INDIA: Assam, Bengal, Orissa and Sikkim Himalaya; Burma.

Ecology: In waste land, along railway embankment; rare.

Specimens examined: Mangalhat (Sahibganj dist.), Varma 2228; Shivnarayanpur (Bhagalpur dist.), Jha 6326.

Canavalia cathartica Thouars. in J. Bot. Desv. 1:81. 1813; Saucer, Brittonia 16: 159.1964; Guha Bakshi, Fl. Murshidabad 101. 1984. *C. ensiformis* (L.) DC. var. *turgida* (Grah. ex Miq.) Baker in Hook. f. Fl. Brit. Ind. 2:196.1876.

Local name: Tihon (Santhali).

Perennial climber; leaves 3-foliolate; flowers